



14 December, 2000

Mr. Jerry Hintze,
Assistant Superintendent of Technical Services
Intermountain Power Service Corp.
850 W Brush Wellman Rd.
Delta Utah 84624-9546

Re: Wallrings to Improve FGD System Performance

Dear Jerry:

The URS Corporation (URS), formally known as Radian International LLC is please to submit a proposal in response to your request for quotation for Absorber Liquid Redistribution Device (ALRD) for installation at the Intermountain Power Plant. This patented technology is currently installed in a number of absorber systems and have significantly improved SO₂ removal in all cases.

Recent testing in the FGD industry has indicated that the majority of emissions from open spray towers is a result of flue gas avoiding contact with the slurry in the spray zone, predominately by escaping along the walls of the vessel. This phenomena is called wall sneackage and can virtually be eliminated by the installation of ALRD's. The wall sneackage is basically limited to a zone stretching from the absorber wall to 5 ft into the vessels. For rectangular vessels, the corner regions is particularly vulnerable to wall sneackage. The ALRD, function is to redistribute the liquid running down the absorber walls into the spray zone. In effect, the ALRD becomes a spray nozzle located on the absorber wall and by such evens out the liquid density inside the absorber which in turns provides a much more even gas liquid contact across the absorber towers.

Through careful review of the current operating conditions of the absorbers at IPP and in no small part from our experience from the pet coke trial burns, URS has been able to predict the performance of the absorber towers after the installation of ALRD's. In the trial burns, by use of formic acid, we established that the maximum SO₂ removal is around 95 percent indicating that about 5 percent of the flue gas goes basically untreated. We predict that by installing ALRD's, the current SO₂ removal performance can be maintained with only 2 pumps in service per absorber tower. Hence, one pump per tower can be removed from service and be on standby enabling IPP to keep absorber modules on line while servicing a pump with no impact on emissions. In effect, this will greatly increase the redundancy and flexibility of your current system. A second major benefit from taking a pump out of service is the reduction in power consumption. URS has estimated that close to 18,000 MWhr can be liberated per year by taking 8 recycle pumps out of service. Using your replacement cost of power, IPP has an opportunity to generate an additional \$900,000.00 per year in power sales. Alternatively, IPP can elect to significantly overscrub by running three spray pumps. Finally, a third direct benefit is a reduction in pressure drop across the scrubbers from taking one pump out of service. We estimate that the reduction in pressure drop be greater than 0.5 inches of water gauge.

URS Corporation
One Penn Plaza, Suite 610
New York, NY 10119-0698
Tel: 212.736.4444
Fax: 212.629.4249
www.urscorp.com



Page 3 of 3

The installation price is contingent on reasonable access to the absorber modules for installations of the ALRD's in a fashion that does not expose the project to any unreasonable delays or extension in schedule.

Given the current power shortage in western United States, this project is in line with your current efforts to increase the power output from the station. The payback is very attractive and we are confident that the technology will provide the expected improvements in efficiency and reduction in power consumption.

I would be happy to meet with you to discuss our proposal in more detail including the detail design and experience with ALRD's to date..

Please call me at 512.419.5439 to discuss.

Sincerely,

URS Corporation

Jonas S. Klingspor
Business Development Manager

URS Corporation
One Penn Plaza, Suite 610
New York, NY 10119-0698
Tel: 212.736.4444
Fax: 212.629.4249
www.urscorp.com

2IP11-000002



Page 2 of 3

Along the line of our previous discussions, we suggest that the technology be demonstrated on one absorber tower to confirm the benefit of this technology. This can be done on an accelerated schedule and depending on the availability of the required alloy materials, could be completed in the first half of 2001.

Following the successful demonstration of the ALRD's, the remaining towers would be retrofitted. It is important to point out that the absorber modules can be retrofitted with ALRD's during the regular cleaning and maintenance cycle. Hence, the retrofit should have no impact on the plants ability to produce power.

We are please to make the following proposal to IPP:

Step One:

Installation of two ALRD devices in one absorber module. 317 LMN has been selected as material for the shelves, brackets, and bolts.

Price\$76,500.00

The price includes engineering, procurement and shipping. It does not include installation and testing. A technology fee and a license fee will not be charged for the demonstrations phase of this project.

Option 1: Installation.....\$78,200.00

Option 2: Testing of one absorber module for SO₂ removal and concentration profile before and after the installation of ALRD's.....\$20,000.00

Step Two:

Installation of two ALRD devices in the remaining 11 absorber modules. 317 LMN has been selected as material for the shelves, brackets, and bolts.

Price\$467,500.00

Annual technology fee (for 5 years).....
\$180,000.00

The price includes engineering, procurement and shipping. It does not include installation and testing.

Option 3: Installation.....\$683,100.00

URS Corporation
One Penn Plaza, Suite 610
New York, NY 10119-0698
Tel: 212.736.4444
Fax: 212.629.4249
www.urscorp.com